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      (FILE 'HOME' ENTERED AT 13:42:15 ON 06 AUG 2003)

      FILE 'MEDLINE, EMBASE, CAPLUS, BIOSIS' ENTERED AT 13:42:30 ON 06 AUG 2003
L1         22571 S (ABORT? OR PREGNAN? OR FERTIL?) (P) (IMMUNE OR IMMUNOLOGICAL
L2            10 S L1 AND (OX-2 OR OX2 OR CD200)
L3             4 DUP REM L2 (6 DUPLICATES REMOVED)
L4          1389 S OX-2 OR OX2 OR CD200
L5           989 DUP REM L4 (400 DUPLICATES REMOVED)
L6           855 S L5 AND (OX-2 OR OX2 OR CD200)/AB

=> s L6 and (lymphocyte or macrophage or (T (1w) cell))
L7            67 L6 AND (LYMPHOCYTE OR MACROPHAGE OR (T (1W) CELL))

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8            67 DUP REM L7 (0 DUPLICATES REMOVED)

=> d L8 ibib abs 1-67
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L8 ANSWER 63 OF 67 MEDLINE on STN
ACCESSION NUMBER: 84263168 MEDLINE
DOCUMENT NUMBER: 84263168 PubMed ID: 6146566
TITLE: Association of some cell surface antigens of lymphoid cells and cell surface differentiation antigens with early rat pregnancy.
AUTHOR: Bukovsky A; Presl J; Zidovsky J
SOURCE: IMMUNOLOGY, (1984 Aug) 52 (4) 631-40.
Journal code: 0374672. ISSN: 0019-2805.
PUB. COUNTRY: ENGLAND: United Kingdom .
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198409
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19950206
Entered Medline: 19840919

AB Monoclonal antibodies and the immunoperoxidase technique were used to localize some cell surface antigens of rat lymphoid cells and cell surface differentiation antigens on cryostat sections of early rat pregnancies. The W3/13 leucocyte sialoglycoprotein was detected almost constantly on trophoblast. The immunoglobulins were more associated with mother's rather than with embryo-derived tissues. We were unable to detect considerable amounts of class I and class II major histocompatibility complex-derived antigens on trophoblast and adjacent decidual cells. The Ia+ cells of the **lymphocyte** type were occasionally detected in the sites exhibiting presence of immunoglobulins. The Thy-1 cell surface differentiation antigen was detected on the cells producing Thy-1+ material among decidual cells. Depletion of Thy-1 was followed by the regression of decidualized tissue. The **OX-2** antigen, known as minor glycoprotein of rat thymocytes, was detected on trophoblast cells and endothelia of decidual vessels, the latter exhibiting also class I major histocompatibility complex-derived antigens. The non-pregnant uterine tissues, as well as the oviduct epithelium were also investigated. The possible role of some of these antigens in the maintenance of the 'immunologically privileged' stage of trophoblast, and in the control of the rearrangement of maternal tissues surrounding the embryo, is discussed.

L8 ANSWER 62 OF 67 MEDLINE on STN
ACCESSION NUMBER: 84282626 MEDLINE
DOCUMENT NUMBER: 84282626 PubMed ID: 6147195
TITLE: The ovarian follicle as a model for the cell-mediated control of tissue growth.
AUTHOR: Bukovsky A; Presl J; Holub M
SOURCE: CELL AND TISSUE RESEARCH, (1984) 236 (3) 717-24. Journal code: 0417625. ISSN: 0302-766X.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198410
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19990129
Entered Medline: 19841019

AB Thy-1+ cells, producing Thy-1+ material, have been demonstrated by the indirect immunoperoxidase technique in the theca of growing ovarian follicles of the rat. **OX-2** antigen, known as the minor glycoprotein of rat thymocytes, was detected in granulosa cells of non-growing follicles. Ia+ cells of dendritic type and/or activated **macrophages** were identified in the granulosa of advanced degenerating follicles, and remnants of the zona pellucida exhibited immunoglobulins. In some ovaries immunoglobulins were also bound to the zona pellucida of oocytes of early degenerating antral follicles. Medium-sized antral follicles with degenerating granulosa were occasionally invaded by cells carrying antigens of cytotoxic T **lymphocytes** or other T **lymphocyte** subsets, while degenerating large antral follicles were sometimes invaded by cells exhibiting antigen of cells with natural killer function (but not antigens of T **lymphocytes**). Granulosa cells of some degenerating antral follicles exhibited class-I antigens derived from the major histocompatibility complex. We suggest that cell-mediated control mechanisms of antigen expression and metabolism of tissue cells during their differentiation and degeneration should be considered in addition to the well-documented hormonal dependence of some tissues.

L8 ANSWER 57 OF 67 MEDLINE on STN
ACCESSION NUMBER: 85257428 MEDLINE
DOCUMENT NUMBER: 85257428 PubMed ID: 2862025
TITLE: MRC **OX-2** antigen: a lymphoid/neuronal membrane glycoprotein with a structure like a single immunoglobulin light chain.
AUTHOR: Clark M J; Gagnon J; Williams A F; Barclay A N
SOURCE: EMBO JOURNAL, (1985 Jan) 4 (1) 113-8.
Journal code: 8208664. ISSN: 0261-4189.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X01785
ENTRY MONTH: 198508
ENTRY DATE: Entered STN: 19900320
Last Updated on STN: 19950206
Entered Medline: 19850830

AB The MRC **OX-2** antigen is a rat cell surface glycoprotein of mol. wt. 41 000-47 000 found on neurones, thymocytes, B cells, follicular dendritic cells and endothelium. We now report the amino sequence for this antigen as deduced from the nucleotide sequence of cDNA clones detected by use of an oligonucleotide probe. The sequence contains 248 amino acid residues of which 202 residues are likely to be outside the cell with two domains that show homology with immunoglobulins. The N-terminal domain fits best with Ig V domains and Thy-1 antigen while the C-terminal part is like an Ig C domain. Thus the structure overall is similar to an Ig light chain or the **T cell** receptor beta chain. Three glycosylation sites are identified on each of the MRC **OX-2** antigen domains.

L8 ANSWER 49 OF 67 MEDLINE on STN
ACCESSION NUMBER: 87192943 MEDLINE
DOCUMENT NUMBER: 87192943 PubMed ID: 3032785
TITLE: Characterization of the human homolog of the rat MRC **OX-2** membrane glycoprotein.
AUTHOR: McCaughan G W; Clark M J; Barclay A N
SOURCE: IMMUNOGENETICS, (1987) 25 (5) 329-35.
Journal code: 0420404. ISSN: 0093-7711.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-M17226; GENBANK-M17227; GENBANK-M17228; GENBANK-M17229
ENTRY MONTH: 198706
ENTRY DATE: Entered STN: 19900303
Last Updated on STN: 19900303
Entered Medline: 19870624

AB The MRC **OX-2** antigen is a membrane glycoprotein present on rat thymocytes, neurons, follicular dendritic cells, endothelium, and some smooth muscle. The sequence of 248 amino acids has similarities to Ig domains organized with one V-like domain, one C-like domain, and transmembrane and cytoplasmic regions. Thus it resembles a **T-cell** receptor chain but shows no sequence divergence. We report the characterization of the human gene for this molecule. Its exon organization is similar to that found for immunoglobulins although the region with similarities to Ig J regions is found within the same exon as the V-like domain. Human MRC **OX-2** is expressed at the mRNA level in brain and B-cell lines but not detected in liver or **T-cell** lines. It does not obviously correspond to any previously defined leukocyte antigen. The sequence homology for the human and rat MRC **OX-2** molecules is higher for the Ig-related region (75%) than for many other Ig-related molecules and very high in the transmembrane region (96%), implying a functional role other than simply its anchoring into the membrane.

L8 ANSWER 35 OF 67 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1997:511666 CAPLUS
DOCUMENT NUMBER: 127:120710
TITLE: **T cell**-mediated immune response modulation by **OX-2** costimulatory molecule and its agonists and antagonists
INVENTOR(S): Borriello, Francescopaolo; Sharpe, Arlene H.
PATENT ASSIGNEE(S): Brigham and Women's Hospital, Inc., USA
SOURCE: PCT Int. Appl., 93 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9721450	A1	19970619	WO 1996-US19189	19961127
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9711440	A1	19970703	AU 1997-11440	19961127

PRIORITY APPLN. INFO.: US 1995-8754P P 19951208
WO 1996-US19189 W 19961127

AB Methods and compns. for using the **OX-2** protein to modulate a **T cell**-mediated immune response are described. Novel structure forms of **OX-2 T cell** costimulatory mols. are described. These structural forms comprise a novel structure domain or have a structural domain deleted. The structural forms correspond to naturally-occurring alternatively-spliced forms of **OX-2 T cell** costimulatory mols. or variants thereof which can be produced by std. recombinant DNA techniques. The novel structure forms of the **OX-2 T cell** costimulatory mols. can be used to identify agents which stimulate the expression of alternative forms of costimulatory mols. and to identify components of the signal transduction pathway which results in costimulation of **T cells**

L8 ANSWER 17 OF 67 MEDLINE on STN
ACCESSION NUMBER: 2001385133 MEDLINE
DOCUMENT NUMBER: 21332441 PubMed ID: 11437633
TITLE: Procoagulants in fetus rejection: the role of the **OX-2** (**CD200**) tolerance signal.
AUTHOR: Clark D A; Yu G; Levy G A; Gorczynski R M
CORPORATE SOURCE: Departments of Medicine, Molecular Medicine & Pathology, Obstetrics & Gynecology, Mucosal Immunology Group, Immunology and Inflammation Program, McMaster University, Rm. 3V39, 1200 Main Street West, Hamilton, Ontario, L8N 3Z5, Canada.. clarkd@mcmaster.ca
SOURCE: SEMINARS IN IMMUNOLOGY, (2001 Aug) 13 (4) 255-63. Ref: 45
Journal code: 9009458. ISSN: 1044-5323.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20011015
Last Updated on STN: 20011015
Entered Medline: 20011011

AB The spontaneous loss of normal karyotype embryos may be initiated or prevented by the maternal immune system. In mice, loss between the time of implantation (day 4.5) and formation of a vascularized placenta (day 9.5) when the embryo is too large to survive by diffusion alone, is analogous to occult pregnancy failure in humans. They are called occult because usually the woman does not know she is pregnant. From studies in mice, these early losses have a different mechanism than abortion of a vascularized placenta (analogous to clinically evident human spontaneous miscarriage). The latter depend on the activation of the novel prothrombinase fgl2 on the fetal trophoblast and in maternal decidua by the T helper-1 (Th1) type cytokines TNF- alpha+gamma -interferon that arise from NK cells and NK gammadelta **T cells**;
conversion of prothrombin to thrombin which in turn generates IL8 that activates polymorphonuclear leukocytes leads to embryonic death. These inflammatory processes are counteracted by Th2/3-type cytokines that arise in part from V gamma 1 delta 6 **T cells** reacting to, as
yet, unidentified trophoblast antigens in the presence of the 'tolerance signaling molecule' **OX-2**. By contrast,
peri-implantation losses (between implantation and formation of a vascularized placenta, analogous to occult losses in humans) appear to be dependent upon perforin(+)cells, complement activation, and products of alphabeta T and NK alphabeta **T cells**, but not on TNF-
alpha or procoagulant activation. Similarities and differences between findings in the mouse and human, and the potential evolutionary significance of mechanisms affecting reproductive success are reviewed.

L8 ANSWER 16 OF 67 MEDLINE on STN
ACCESSION NUMBER: 2001679815 MEDLINE
DOCUMENT NUMBER: 21582469 PubMed ID: 11726033
TITLE: Evidence for an immunoregulatory role of **OX2** with its counter ligand (OX2L) in the regulation of transplant rejection, fetal loss, autoimmunity and tumor growth.
AUTHOR: Gorczynski R M
CORPORATE SOURCE: The Toronto Hospital, University Health Network, Ontario, Canada.. rgorczynski@transplantunit.org
SOURCE: ARCHIVUM IMMUNOLOGIAE ET THERAPIAE EXPERIMENTALIS, (2001) 49 (4) 303-9. Ref: 63
Journal code: 0114365. ISSN: 0004-069X.
PUB. COUNTRY: Poland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200205
ENTRY DATE: Entered STN: 20011203
Last Updated on STN: 20020529
Entered Medline: 20020528

AB Transplantation has emerged as an effective treatment for patients with end-stage organ failure. Current regimens of non-specific immunosuppressive drug treatment, which are needed life-long to prevent graft rejection, have numerous adverse side effects and increase the risk of opportunistic infections and malignancy. A major goal is to develop immunotherapeutic protocols that achieve specific tolerance. Such protocols would decrease and eventually eliminate the reliance on non-specific drug therapy. We showed that portal vein delivery of donor antigen prolongs the survival of vascularized and non-vascularized allo- and xeno-grafts, and that increased graft survival is associated with altered cytokine production and augmented expression of the molecule **OX2**. This review documents further evidence for a more general immunoregulatory role for the interactions of **OX2** and its ligand, OX2L

L8 ANSWER 9 OF 67 MEDLINE on STN
ACCESSION NUMBER: 2002487254 MEDLINE
DOCUMENT NUMBER: 22234700 PubMed ID: 12322892
TITLE: The same immunoregulatory molecules contribute to successful pregnancy and transplantation.
AUTHOR: Gorczynski Reginald M; Hadidi Sima; Yu Gary; Clark David A
CORPORATE SOURCE: Transplant Research Division, The Toronto Hospital, Ontario, Canada.. rgorczynski@uhnres.utoronto.ca
SOURCE: AMERICAN JOURNAL OF REPRODUCTIVE IMMUNOLOGY, (2002 Jul) 48 (1) 18-26.
Journal code: 8912860. ISSN: 1046-7408.
PUB. COUNTRY: Denmark
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 20020927
Last Updated on STN: 20030130
Entered Medline: 20030129

AB PROBLEM: At least two dendritic cell-associated molecules have been shown to contribute to the successful outcome of organ and tissue allografts in mice, namely **CD200** and MD-1. **CD200** is up-regulated in rodent transplantation models where successful inhibition of rejection is accomplished, and is believed to signal immunosuppression following engagement of a receptor, CD200R, on **macrophages** and/or gammadelta **T-cell** receptor (gammadelta TCR+ cells MD-1 is implicated in controlling expression of costimulatory molecules including CD80/CD86 which induce an immunorejection response, and thus inhibition of MD-1 expression also facilitates increased graft survival MD-1 also stabilizes expression of CD14, part of the receptor complex for LPS. As well as the inhibition of rejection which follows blockade of MD-1 expression and/or augmentation of **CD200** expression, an altered polarization in cytokine production is seen, with increased expression of interleukin-4 (IL-4), IL-10 and transforming growth factor-beta (TGF-beta), and decreased IL-2, interferon-gamma (IFN-gamma) and tumor nerosis factor-alpha (TNF-alpha). Successful pregnancy in allopregnant mice also depends upon control of graft rejection mechanisms. Proinflammatory T-helper 1 (Th1) cytokines (TNF-alpha + IFN-gamma + IL-1) have been shown to cause spontaneous abortion in mice by activating a novel prothrombinase, fibrinogen-like peptide (fibroleukin) fgl2, which may promote fibrin deposition in the graft rejection process; expression of IL-10, TGF-beta, and progesterone-induced blocking factor (PIBF) in contrast leads to lowering of abortion rates. Interestingly, the spontaneous abortion rates in abortion-prone CBA x DBA/2 matings and in the low abortion rate CBA x BALB/c matings were lower than the frequency of implantation sites showing fibrin(hi) + fgl2 (mRNA)hi, implying regulation of the pro-abortion consequences of fgl2 expression. METHODS: We have investigated, by in situ hybridization, **CD200**, MD-1 and fgl2 expression in implantation sites in different strains of mice, and studied the effects of anti-MD-1, anti-**CD200** and CD200Fc immunoadhesin on fetal and allograft survival. The role of indoleamine dioxygenase (IDO) was evaluated. RESULTS: **CD200** mRNA expression occurred in the same sites as fgl2 mRNA. Anti-**CD200** antibody raised the abortion rate to predicted levels, and infusion of a **CD200** immunoadhesin reduced the abortion rate, as did an anti-MD-1 antibody. The latter also improved organ and tissue graft survival. Suppression by antigen-presenting **macrophages** triggered by **CD200** is dependent upon intact IDO activity. CONCLUSION: Regulation of **CD200** and MD-1 expression may control both pregnancy and allograft survival.

L8 ANSWER 7 OF 67 MEDLINE on STN
ACCESSION NUMBER: 2002328639 MEDLINE
DOCUMENT NUMBER: 22068374 PubMed ID: 12072366
TITLE: **CD200** and membrane protein interactions in the control of myeloid cells.
AUTHOR: Barclay A Neil; Wright Gavin J; Brooke Gary; Brown Marion H
CORPORATE SOURCE: Sir William Dunn School of Pathology, University of Oxford, OX1 3RE, Oxford, UK.. barclay@molbiol.ox.ac.uk
SOURCE: Trends Immunol, (2002 Jun) 23 (6) 285-90. Ref: 59
Journal code: 100966032. ISSN: 1471-4906.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200208
ENTRY DATE: Entered STN: 20020620
Last Updated on STN: 20020820
Entered Medline: 20020819

AB **OX2** (now designated **CD200**) is a membrane protein expressed by a broad range of cell types. It is the ligand for a receptor restricted to myeloid cells, with the potential to deliver inhibitory signals. This is indicated by the **CD200**-deficient mouse model, in which myeloid cells are more activated when stimulated immunologically than cells from normal mice. The unusual tissue distribution of **CD200** indicates where myeloid cells can be restrictively controlled through cell-cell contact. Recent data on **CD200** will be reviewed in the context of other proteins that might have similar roles, in particular, the interaction between CD47 and SIRPalpha (CD172a).